

Remarks/Arguments:

This amendment adds no new claims, and is provided to amend claims 1, 3, 12 and 16. No new matter has been added. Upon entry of this amendment, claims 1-24 will be pending.

Rejections of the Claims under 35 U.S.C. 102

The Examiner has rejected claims 1 and 12-13 under 35 U.S.C. 102(e), as being anticipated by U.S. Patent No. 6,687,283, issued to Naoe et al. (hereinafter Naoe). Specifically, the Examiner points to Naoe as disclosing a multibeam light source unit having a laser diode unit, a rotational member, a fixing member, a temporary joining part and a fixing part, purportedly anticipating the invention as claimed by the Applicant in claim 1. The Examiner further points to Naoe as disclosing a scanning/image resulting unit having a polygon mirror and a scanning lens, and a frame, purportedly anticipating the invention as claimed by the Applicant in claim 12.

In the Examiners "Response to Argument" section, the Examiner states that the broadest reasonable interpretation of claims 1 and 12 as previously amended still read on Naoe. That is, the Applicant believes that the use of "restriction" in the previous amendment of October 13, 2006, and the fixing part and fixing member as claimed, are believed by the Examiner to read on the bracket 20, base member 30, and hard stop provided between pin 29 and hole 39 of Naoe.

However, the Applicant has amended claims 1 and 12 to instead recite that the rotational member rotates "under elastic force, wherein the elastic force is increased when the rotational member is rotated for position alignment". This is not new matter and is noted in the specification and figures (see for example, page 8, lines 7-13, and dependent claims 2-3 and 15-16). Dependent claims 3 and 16 have been amended to correct antecedent basis of such elastic force.

The Examiner points to the base member 30, having fitting cylinder 32 and loose insertion hole 39, as disclosing a rotational member and temporary joining part as claimed by the Applicant. However, the Applicant has revised the earlier amendment to claims 1 and 12 to recite that the rotational member rotates under elastic force, which increases at specific locations.

That is, in contrast to the fitting cylinder 32 of base member 30, the Applicant's rotational boss 125 can rotate 360 degrees within the boss cavity 131a under elastic force. The rotational boss 125 has an outer circumference having elastic ribs 151, such that the elastic ribs 151 (and slots 152 behind each) about the inner circumference of the boss cavity 131a elastically support the circumference of the boss rotational boss 125, and at certain points along its 360 degrees of rotation, elastically support contact surface parts 125a of the rotational boss 125 to create greater elastic force between the boss 125 and opening 131a, but never serve to hard stop the rotational boss 125. The rotational boss remains free to rotate. Rotation of the rotational boss 125 is only totally stopped by securing screws of the fixing part 160.

In contrast, the fitting cylinder 32 and through hole 25, and the rotation restricting pin 29 and the loose insertion hole 39 disclosed by Naoe, do not disclose or reasonably suggest a rotational member and temporary joining part for providing rotation under elastic force. The Naoe reference describes the use of whatever friction may exist between the fitting cylinder 32 and through hole 25 (see col. 8, lines 60-65).

Further, Naoe does not disclose or reasonably suggest rotation under increased elastic force, as claimed by the Applicant in claims 1 and 12. The restricting pin 29 of Naoe, allows movement only to the extent allowed by hole 39, at which point, no rotation is allowed. That is, rotation occurs having a substantially constant friction, as the Naoe features do not vary over rotational position, until reaching contact between pin 29 and hole 39 which acts as a hard stop. The substantially constant friction from start to hard stop does not disclose or suggest increased and decreased levels of rotational elastic force. One level of rotational friction and a hard stop is described.

Accordingly, rotation under any elastic force or rotation under increased elastic force as claimed by the Applicant is not disclosed or reasonably suggested by Naoe.

For these reasons, the Applicant asserts that the Naoe reference does not disclose or reasonably suggest each element as claimed by the Applicant in independent claims 1 and 12 as amended. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 102(e) of independent claims 1 and 12, and requests the withdrawal of the rejection of dependent claim 13 which depends from claim 12, for the same reasons.

Regarding claim 13, the Examiner, in addition to the reasons stated above, further points to Naoe as disclosing the multi-beam light source unit being fixed and installed in a bottom wall of a frame, purportedly anticipating the invention as claimed by the Applicant in claim 13.

However, for the reasons stated above, the Applicant asserts that the Naoe reference does not disclose or reasonably suggest each element as claimed by the Applicant in independent claim 12 as amended, from which claim 13 depends. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 102(e) of dependent claim 13 for the same reasons.

Rejections of the Claims under 35 U.S.C. 103

The Examiner has rejected claims 6 and 22-24 under 35 U.S.C. 103(a) as being unpatentable over Naoe, in view of U.S. Patent Publication No. 2005/020617, issued to Boyatt, III et al. (hereinafter Boyatt). Specifically, regarding claim 6, the Examiner points to Naoe as disclosing the claimed invention with the exception of a multi-beam semiconductor laser diode and the operation circuit board connected to the rotational member. The Examiner points to Boyatt as disclosing a multi-beam semiconductor laser diode and an operation circuit board connected to the rotational member, purportedly rendering obvious the invention as claimed by the Applicant in claim 6.

However, for the reasons stated above, the Applicant asserts that the Naoe and Boyatt references do not disclose or reasonably suggest alone or in combination, each element as claimed by the Applicant in independent claim 1 as amended, from which claim 6 depends. Specifically, neither Naoe or Boyatt alone or in combination disclose or reasonably suggest a rotational member that rotates under elastic force, wherein the elastic force is increased when the rotational member is rotated for position alignment. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claim 6 for the same reasons.

Regarding claims 22-24, the Examiner points to Naoe as disclosing the claimed invention with the exception of the settle unit as part of the fixing unit. The Examiner points to Boyatt as disclosing a first and second member having a settle unit as part of the fixing unit and a collimating lens and lens holder, purportedly rendering obvious the invention as claimed by the Applicant in claims 22-24.

However, the Applicant has amended claim 12 from which claims 22-24 depend. Accordingly, for the reasons noted above, the Applicant asserts that the Naoe and Boyatt references do not disclose or reasonably suggest alone or in combination, each element as claimed by the Applicant in independent claim 12 as amended, from which claims 22-24 depend. Specifically, neither Naoe or Boyatt alone or in combination disclose or reasonably suggest a rotational member that rotates under elastic force, wherein the elastic force is increased when the rotational member is rotated for position alignment. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 22-24 for the same reasons.

The Examiner has rejected claims 7-9, 14 and 19-21 under 35 U.S.C. 103(a) as being unpatentable over Naoe, in view of U.S. Patent No. 6,992,690, issued to Mogi et al. (hereinafter Mogi). Specifically, the Examiner points to Naoe as disclosing the claimed invention with the exception of the rotational member comprising an arc

shaped slot through which at least one screw passes. The Examiner points to Mogi as disclosing an arc shaped slot through which at least one screw passes, purportedly rendering obvious the invention as claimed by the Applicant in claims 7-9 and 19-21.

However, the Applicant has amended claims 1 and 12 from which claims 7-9 and 19-21 depend. Accordingly, for the reasons noted above, the Applicant asserts that the Naoe and Mogi references do not disclose or reasonably suggest alone or in combination, each element as claimed by the Applicant in independent claims 1 and 12 as amended, from which claims 7-9 and 19-21 depend. Specifically, neither Naoe or Mogi alone or in combination disclose or reasonably suggest a rotational member that rotates under elastic force, wherein the elastic force is increased when the rotational member is rotated for position alignment. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 7-9 and 19-21 for the same reasons.

Regarding claim 14, the Examiner points to Naoe as disclosing the claimed invention with the exception of a cylindrical lens for linearly condensing a plurality of laser beams on a reflection surface of the polygon mirror. The Examiner points to general knowledge of those skilled in the art as disclosing such a cylindrical lens, purportedly rendering obvious the invention as claimed by the Applicant in claim 14.

However, the Applicant has amended claim 12 from which claim 14 depends. Accordingly, for the reasons noted above, the Applicant asserts that neither the Naoe reference or general knowledge of those skilled in the art disclose or reasonably suggest alone or in combination, each element as claimed by the Applicant in independent claim 12 as amended, from which claim 14 depends. Specifically, neither Naoe or general knowledge of those skilled in the art alone or in combination disclose or reasonably suggest a rotational member that rotates under elastic force, wherein the elastic force is increased when the rotational member is rotated for position alignment. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claim 14 for the same reasons.

Double Patenting Rejection

The Examiner has provisionally rejected Applicant's claims 6, 9 and 14 as being unpatentable over claims 6, 3 and 12 of copending Application No. 10/827,422 (Atty. Ref. No. 46281-OEC/1631/US) in view of Naoe.

Regarding Applicant's claim 6, the Examiner points to claims 1, 2 and 6 of the copending Application No. 10/827,422 as disclosing a diode unit, a rotating member and a fixing member, wherein the diode unit comprises a driving circuit board.

Regarding Applicant's claim 9, the Examiner points to claims 1, 2 and 3 of the copending Application No. 10/827,422 as disclosing a diode unit, a rotating member, a fixing member, a pair of screws and a pair of circular arc-shaped holes into which the screws are engaged to fix the rotating member to the fixing member.

Regarding Applicant's claim 14, the Examiner points to claims 9 and 12 of the copending Application No. 10/827,422 as disclosing a multibeam light source unit, a scanning/image resolution unit and a frame, wherein the rotating member comprises a press fit hole, the fixing member comprises a first member, and comprises a second member fixed onto the bottom of a frame.

However, as noted by the Examiner, the claims 3, 6 and 12 of the copending Application No. 10/827,422 do not recite the temporary joining part for maintaining joining status between the rotational member and the fixing member in such a way that the rotational member rotates, but cannot easily rotate when the rotational member is rotated for position alignment. The Examiner points to Naoe as disclosing such a temporary joining part for maintaining joining status between the rotational member and the fixing member.

However, the Applicant has amended independent claims 1 and 12, from which claims 6, 9 and 14 depend, as described above. Specifically, the Applicant has amended claims 1 and 12 to further recite a rotational member that rotates under elastic force, wherein the elastic force is increased when the rotational member is

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rotated for position alignment. As discussed above, this is not disclosed or reasonably suggested by either copending Application No. 10/827,422 or Naoe.

Accordingly, Applicant's claims 6, 9 and 14 are now believed to be patentably distinct from the reference claims of the copending Application No. 10/827,422, in view of Naoe. Accordingly, the Applicant respectfully requests the withdrawal of the double-patenting rejection of claims 6, 9 and 14.

Allowable Subject Matter

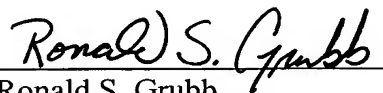
The Examiner is thanked for the allowable subject matter of claims 2-5, 10-11 and 15-18. However, the Examiner is pointed to the added recitation of elastic support and/or elastic force upon the rotational boss in independent claims 1 and 12, and which is currently recited in allowable dependent claims 2-3 and 15-16.

Accordingly, for these reasons noted above, the Applicant believes that all of claims 1-24 are now in condition for allowance.

Conclusion

In view of the above, it is believed that the application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,


Ronald S. Grubb
Reg. No. 48,672
Attorney for Applicant

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Roylance, Abrams, Berdo & Goodman, L.L.P.
1300 19th Street, N.W., Suite 600
Washington, D.C. 20036
T: (202) 659-9076